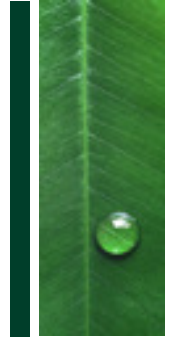


An Overview of the 2012 International Green Construction Code



Objectives

- This presentation is intended to communicate:
 - How the IgCC fits in the context of green building standards and rating systems
 - How and why the IgCC was developed
 - Unique aspects of the IgCC
 - Technical highlights of the IgCC
 - Where the IgCC has been adopted



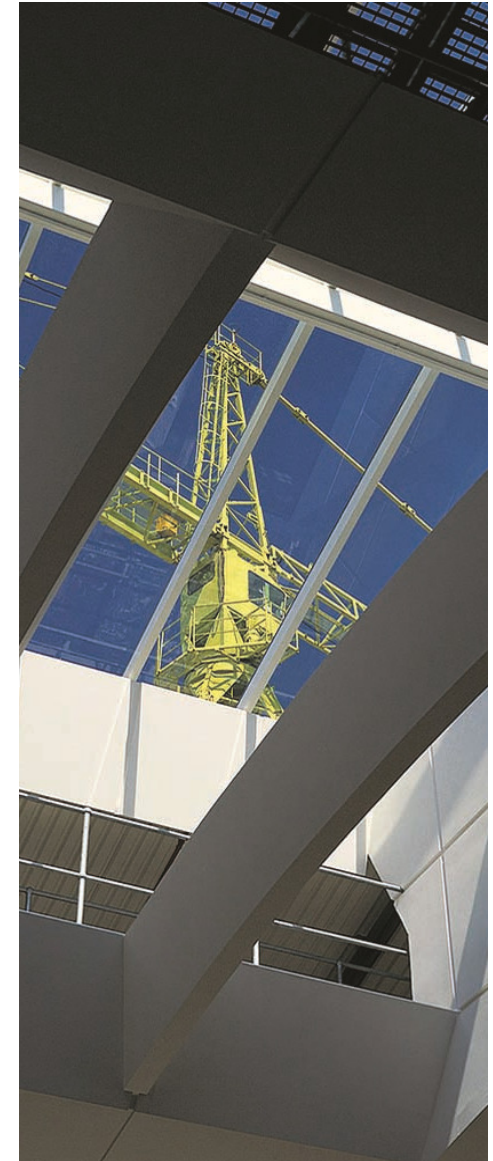
What is the IgCC?

- An Adoptable, Useable and Enforceable *code*.
- Intended to reduce the negative impacts of the built environment on the natural environment
- Addresses
 - Conservation of:
 - Natural resources
 - Materials
 - Energy
 - Water
 - Air & indoor environmental quality



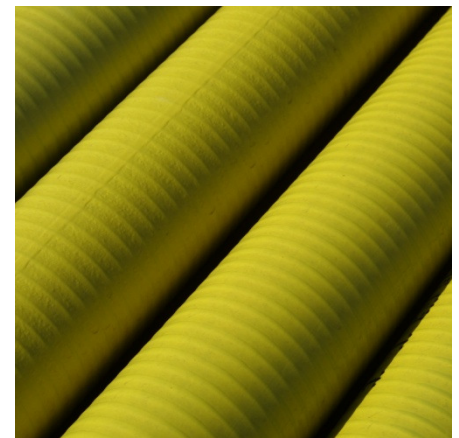
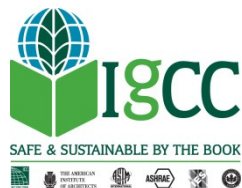
Intent and Scope

- Consistent and coordinated with the ICC family of Codes & Standards
- Intended to be enforced primarily by building officials
- Intended to drive green building into everyday practice
- Applicable to the construction of
 - All buildings, both old and new, except:
 - IRC Buildings
 - R-3 Occupancies
 - R-2 and R-4 Occupancies 4 stories or less in height.
 - Exceptions above are regulated by ICC 700 where the jurisdiction indicates so in Table 302.1.



Developed By:

- IgCC developed by **ICC** in association with cooperating sponsors:
 - ✓ **ASTM** and
 - ✓ **AIA**
- References **ASHRAE 189.1** as an *alternative compliance path*, as developed by:
 - ✓ **ASHRAE** and partners
 - ✓ **IES** and
 - ✓ **USGBC**



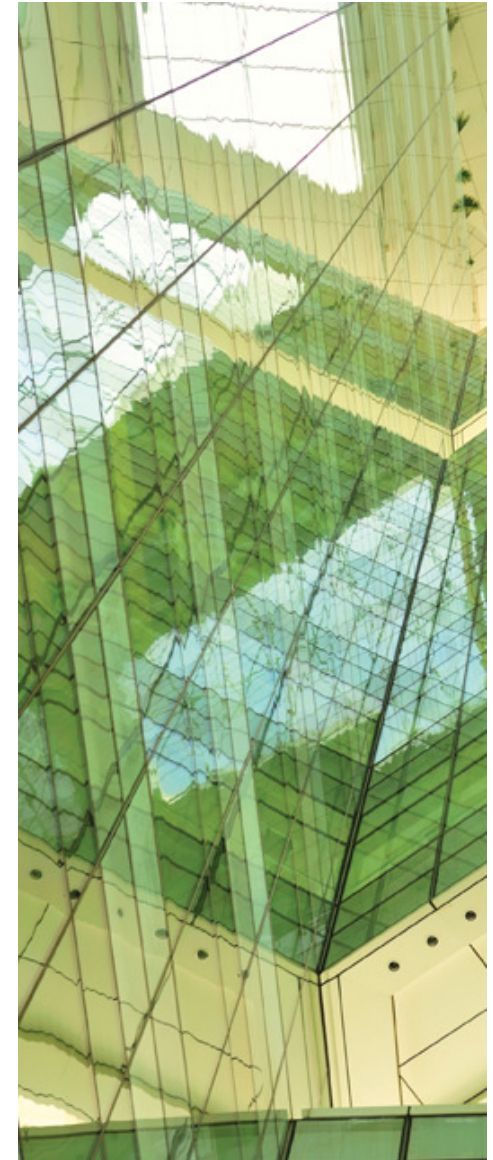
IgCC Context

- Unlike USGBC's highly successful LEED programs, the IgCC was conceived and written with the intent to be adopted on a mandatory basis.
- Only jurisdictions can determine whether the IgCC is adopted on a mandatory or a voluntary basis.
- Voluntary adoptions can open the door to future mandatory adoptions.
- Where adopted on a *mandatory* basis, the IgCC raises the floor of sustainability for **all buildings** – positioning the IGCC to achieve massive environmental benefits not possible with *voluntary* rating systems.

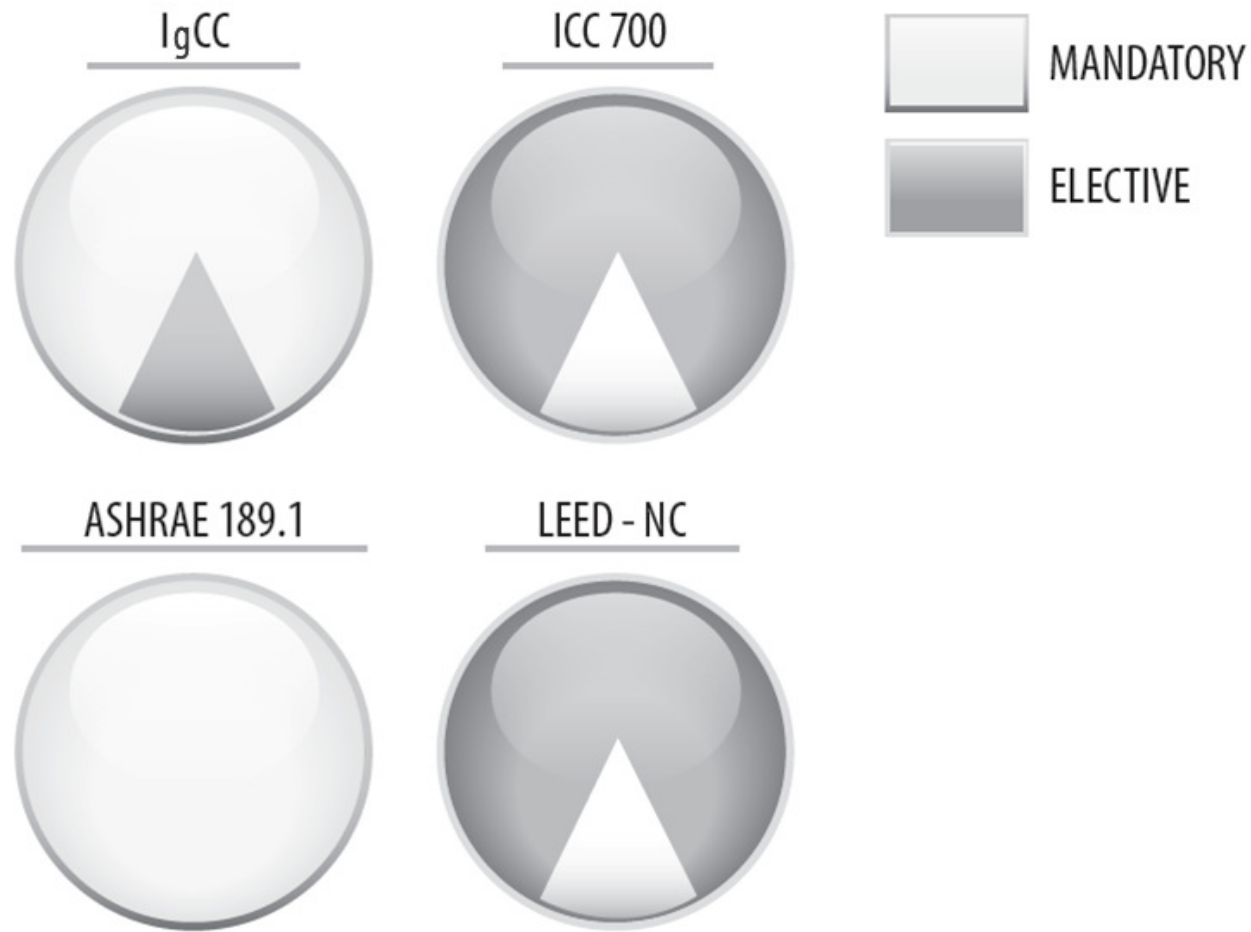


IgCC Context

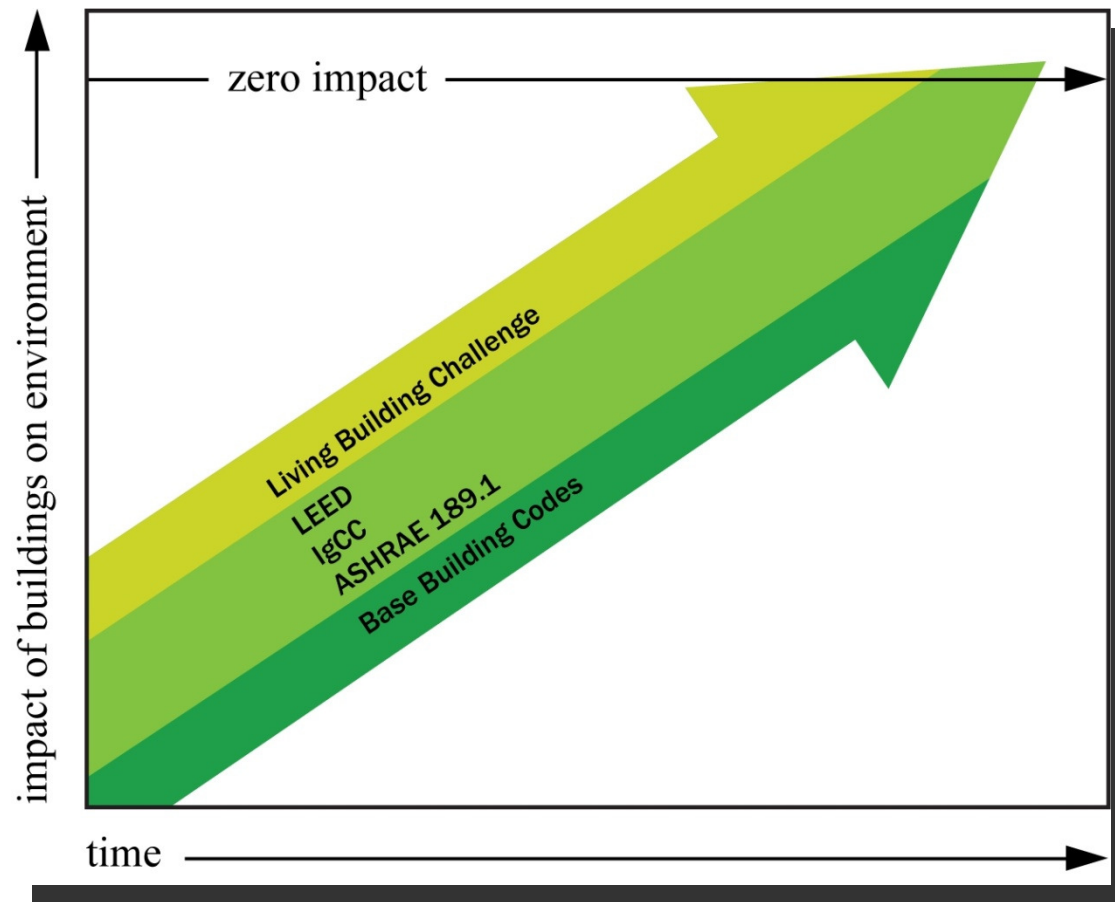
- The IgCC is *not* a rating system, nor is it intended to replace them.
- The IgCC is *code* which is intended to be adopted on a *mandatory* basis.
- Unlike most rating systems, the IgCC primarily consists of *minimum mandatory requirements*, just as other I-Codes.
- The IgCC contains a new regulatory framework that facilitates both jurisdictional customization and flexibility for owners and designers.



Mandatory vs. Elective Provisions

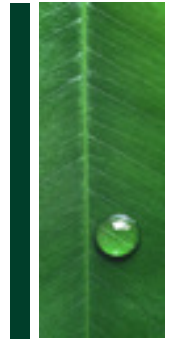


IgCC and other GB Programs



Most GB codes, standards and ratings systems do not yet produce truly sustainable buildings. **But they are all pushing, pulling and leapfrogging each other as they all move gradually toward this goal.**

Chapter 3: Jurisdictional Requirements and Life Cycle Assessment



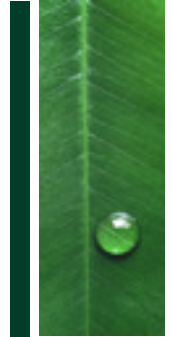
Jurisdictional Requirements

- A new regulatory framework
- Allows jurisdictions to customize the code to address 20 additional environmental criteria
- This criteria may not be appropriate for all jurisdictions.
- May be beneficial in others.
- Allow the jurisdiction to set higher minimum levels of performance.

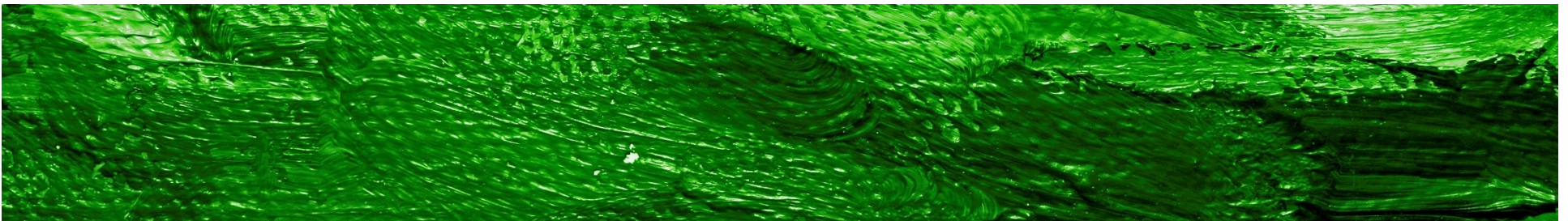
Whole Building Life Cycle Assessment

- Not a mandatory requirement.
- An alternative to the material selection requirements of Section 505.

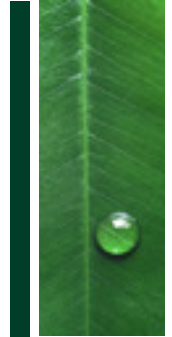
Chapter 4: Site Development and Land Use



- Preservation of natural resources (Tied to T302.1)
 - Allows jurisdictions to prohibit construction in floodplains and limit development of certain sites and site features
 - Natural resources inventory required
- Stormwater management
- Landscape irrigation
- Management of vegetation, soils and erosion control
- Building site waste management
- Transportation impact
- Heat island mitigation
- Site Lighting (Tied to T302.1)



Chapter 5: Material Resource Conservation and Efficiency



- Construction material and waste management plan
 - 50% construction waste diversion min.
 - Jurisdictions can select higher values in Table 302.1
- Requires recycling areas for use by building occupants
- 55% of materials must be:
 - Recycled,
 - Recyclable,
 - Bio-based, or
 - Indigenous.(Materials are permitted to have multiple attributes.)
- Mercury limits for fluorescent lamps
- Moisture control



Chapter 6: **Energy** Conservation, Efficiency & CO₂e Emission Reduction

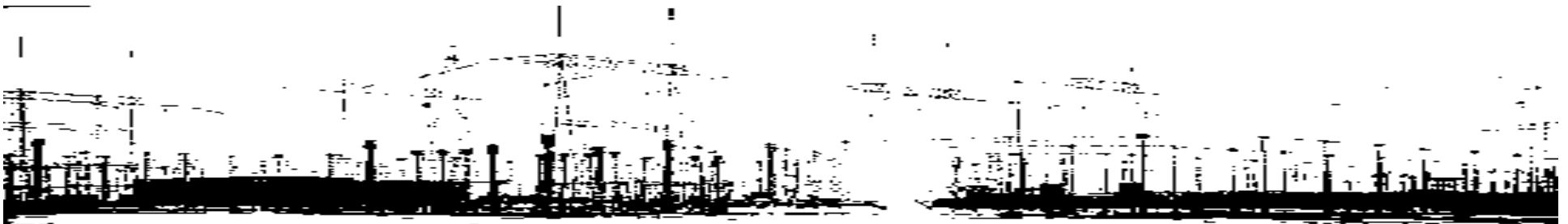
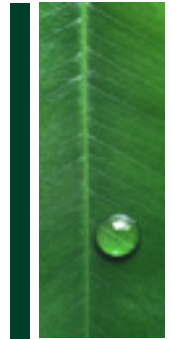


- Chapter 6 is applicable to new buildings and additions to existing buildings.
- Contains detailed energy requirements.
- Energy requirements for alterations to existing buildings are found in Ch 10.
- The IgCC provides the following energy compliance paths:
 - **Prescriptive**-based
 - **Performance**-based zEPI (Zero Energy Performance Index)

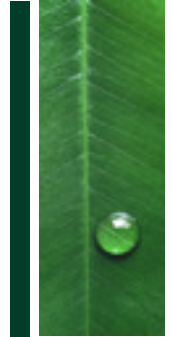


Chapter 6 Contents

- General
- Modeled performance pathway requirements.
- Energy metering, monitoring and reporting
- Automated demand-response infrastructure
- Building envelope systems
- Building mechanical systems
- Building service water heating systems
- Building electrical power and lighting systems
- Specific appliances and equipment
- Building renewable energy systems
- Energy systems commissioning and completion.



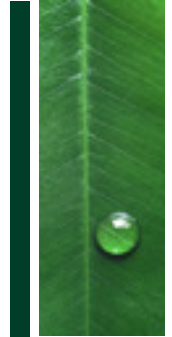
Chapter 7: Water Conservation and Efficiency



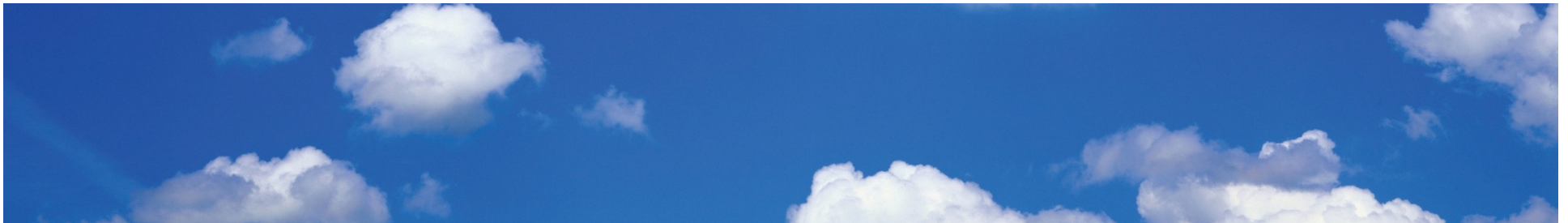
- Seeks water efficiency regardless of the source
- Encourages the use of lower quality water wherever possible and permissible.
- Efficiency provisions for
 - Plumbing fixtures/fittings
 - Appliances
 - Carwashes
 - Cooling towers
- HVAC systems and equipment
- Water treatment systems
- Metering
- Rainwater collection systems
- Gray water reuse systems
- Reclaimed water systems
- Other alternative water sources



Chapter 8: Indoor Environmental Quality and Comfort



- Indoor Air Quality Management Plan Required
- HVAC & Air-handling systems
 - Air-handling system access
 - Durability and cleanability
 - Filters
 - Ventilation requirements
- Prohibits smoking in buildings
- IAQ construction phase requirements
- IAQ & pollutant control measures
- Material emissions limits
- Acoustics (Tied to T302.1)
- Daylighting



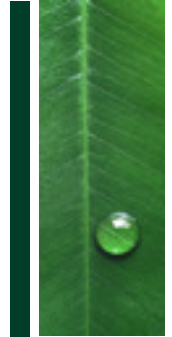
Chapter 9: Commissioning, Operations & Maintenance



- Pre-occupancy inspection and testing
- Operation and maintenance manual
- Building maintenance schedules
- Addresses many issues beyond energy
- Commissioning (T903.1)
 - List of items for which commissioning is required or encouraged
 - Distinguishes between pre-occupancy and post-occupancy commissioning



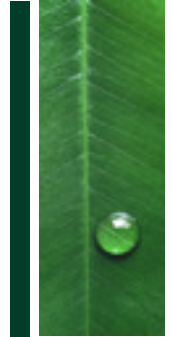
Chapter 10: Existing Buildings



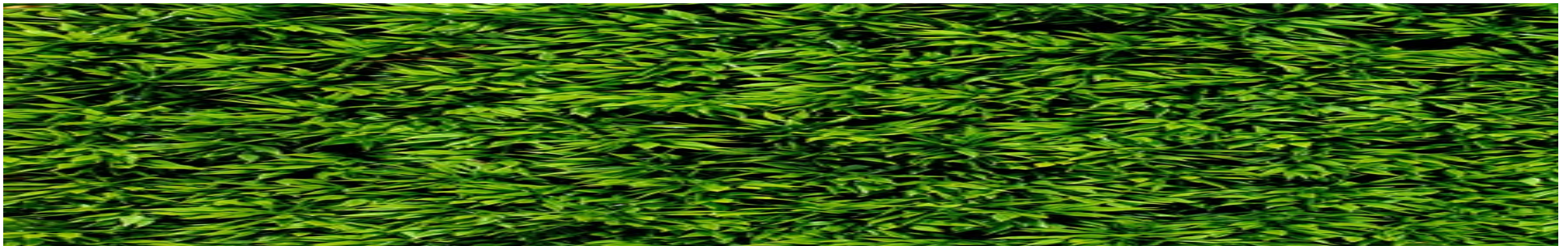
- Alterations/renovations:
 - Loosely based on IBC Ch 34.
 - Whatever is changed must meet current IgCC requirements.
 - Unaltered components can remain as they are
 - Requirements primarily related to energy & water
 - Capped at 10% of the total cost of alterations & other exceptions.
- Additions are treated much like new construction.
- Historic buildings exempted from many provisions
- Jurisdictions can choose to offer the evaluation of existing buildings for IgCC compliance.
- Chapter 11 covers similar info for building sites.



Appendix A: Project Electives



- Encourages and recognizes construction that exceeds minimum code requirements.
- Encourages green practices that are difficult or impossible to mandate. (e.g., infill and brownfield site development).
- Encourages the implementation of practices that are not triggered by the code or mandated by the jurisdiction in Table 302.1.
- Enforceable only where specifically adopted.
- The jurisdiction sets the minimum number of electives that must be complied with on all projects constructed in the jurisdiction.
- The owner or the owners representative select the specific project electives to be implemented on each project.

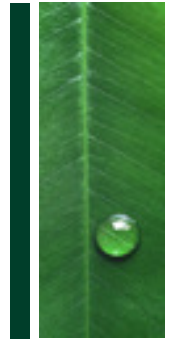


The IgCC is currently adopted in:

- Rhode Island
- Maryland
- Oregon
- Richland, WA
- Keene, NH
- Ft. Collins, CO
- Kayenta Township, AZ
- Boynton Beach, FL
- Phoenix, AZ
- Scottsdale, AZ



For more information see:
www.iccsafe.org/igcc



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Navigation

- ▶ How to Adopt
- ▶ History of the IgCC
- ▶ IgCC Sponsors
- ▶ IgCC in the News
- ▶ News Releases
- ▶ Individual Supporters
- ▶ Get the IgCC
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- ▶ Government Relations
- ▶ Chapter Information
- ▶ ICC Evaluation Service (ICC-ES)
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> Codes, Standards & Guidelines > International Green Construction Code

International Green Construction Code

The International Code Council (ICC), along with its Cooperating Sponsors, is pleased to announce the availability of the **2012 International Green Construction Code (IgCC)**.

Cooperating Sponsors:
American Institute of Architects (AIA)
ASTM International
ASHRAE
U.S. Green Building Council (USGBC)
Illuminating Engineering Society (IES)

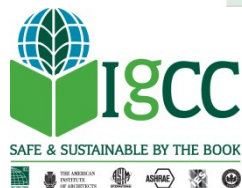

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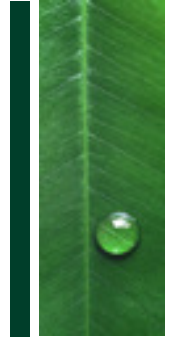

The IgCC is...

The IgCC is the first model code that includes sustainability measures for the entire construction project and its site — from design through construction, certificate of occupancy and beyond. The new code is expected to make buildings more efficient, reduce waste, and have a positive impact on health, safety and community welfare.

The IgCC provides...

Baseline Green Requirements
The IgCC creates a regulatory framework for new and existing buildings, establishing minimum green requirements for buildings and

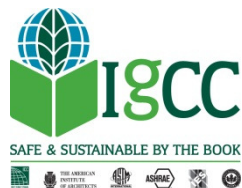




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